

TITLE OF APPLICATION

Amend the title of this application from:

"SURGICAL HANDPIECE WITH AN ACTUATABLE ACCESSORY AND A WIRELESS
NAVIGATION HEAD THAT INCLUDES A DISPLAY UPON WHICH HANDPIECE
POSITION INFORMATION ARE PRESENTED"

to:

"SURGICAL TOOL ASSEMBLY WITH A BATTERY POWERED HANDPIECE FOR
DRIVING AN ACCESSORY AND A REMOVABLE TRACKING UNIT THAT PROVIDES
INFORMATION REGARDING THE POSITION OF THE HANDPIECE,
THE TRACKING UNIT BEING POWERED BY THE HANDPIECE BATTERY"

AMENDMENTS TO THE SPECIFICATION

Please add the new paragraph and replace the following below-indicated paragraph with the below replacement paragraph.

Add the following paragraph after Paragraph 14.

[0014.1] Fig. 4A shows a perspective rear view of an alternative construction of the display unit of FIG 2.;

Replacement paragraphs.

[0037] As shown diagrammatically in FIGS. 1 to 3, the display screen 122 can be mounted to the rear, surgeon directed, face of the tracking and display unit 120. Display screen 122 can simultaneously display multiple display elements. A tool tip position display 136 can be a single lit pixel or LED that indicates the position of the tool tip 112 relative to a predetermined location. An orientation display 138 is also shown on the display screen 122 as a series of four spaced LED's or pixels in the shape of a cross. These four spaced LED's surround a center unlit LED such that the orientation display 138 can surround the tool tip position display 136. Other representations of the tool tip display 136 and the orientation display 138 are possible so long as the representation effectively communicates the desired information to the user.

[0039] The display screen 122 can be formed from any suitable display device capable of displaying a series of discreet pixels. The screen could be a liquid crystal display device (LCD) screen or it could be an array of LED's such as 12×12 array of LED's. The display screen 122 can be capable of displaying a single color or it can display multiple colors such

that the different colors can indicate additional information to the surgeon. As is clear from the below description of the presentation on the display described with respect to Figures 6-9, in the described version of the invention, the presentation is a symbolic location of the tool tip 112 less than an actual image of the tip at the target location. For certain procedures the display unit 120 may also have a hole or aperture through the display unit 120 to allow a guide wire or similar device to pass through the display unit 120. As shown in FIGS. 2 and 4, the tracking and display unit 120 is attached to the distal end 118 of the tool body 102 using a docking structure 152. The docking structure 152 is designed to accommodate and lock into place a docking pin 154, which is centered on the back 160 of the unit body 124. The docking pin 154 and the docking structure 152 are formed such that when the tracking and display unit 120 placed against the distal end 118 of the tool body 102 and urged forward, a center post 162 of the docking pin 154 will enter the center of the docking structure 152 and arms 164 attached to the center post 162 will fit within detents 166 so as to firmly orient and fix the tracking and display unit 120 in place on the distal end 118 of the surgical drill 100. Also, the docking pin 154 has an annular groove 168, which cooperates with a locking mechanism (not shown) within the docking structure 152. The release button 114 deactivates this locking mechanism and allows the tracking and display unit 120 to be removed from the surgical drill 100. ~~Although not shown, it is possible to include on the back 160 and on the distal end 118 an electrical interconnect device 169 (shown as a block element in Figure 4A) such that the tracking and display unit 120 can be powered from the battery pack 116. However, it is preferable that tracking and display unit 120 have its own self-~~

~~contained power source and, accordingly, a battery (not shown) can be inserted into the unit body 124 through a battery door 170.~~ Owing to the presence of battery pack 116 for powering motor 115 and the fact that tracking and display unit 120 are battery powered, no cords extend from drill 100 and tracking and display unit 120 of this invention. Alternatively, tracking and display unit 120 has its own self-contained power source. Accordingly, a battery (not shown) can be inserted through a battery door 170 (Figure 4). In addition to the docking pin 154 and the docking structure 152, any suitable method of attaching the tracking and display unit 120 to the tool body 102 can be used such as a bayonet coupling or other similar quick release positive locking coupling structure. In addition, the tracking and display unit 120 can be integral with the tool body 102.